

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-NE-37-AD; Amendment 39-13350; AD 2003-22-03]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Trent 768-60 and Trent 772-60 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Rolls-Royce plc (RR) RB211 Trent 768-60 and Trent 772-60 turbofan engines. This AD requires reworking the low pressure (LP) turbine nozzle vane case, the LP turbine bearing support exhaust case, and the support arm bracket assemblies. This AD is prompted by a report of an LP stage 4 blade failure at the blade shank, resulting in severe radial distortion of the rear flange of the LP turbine case and failure of a number of attaching bolts, resulting in enough flange separation to allow the release of high energy debris. We are issuing this AD to prevent possible uncontained LP turbine case failure and damage to the airplane.

DATES: Effective November 14, 2003. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of November 14, 2003. We must receive any comments on this AD by December 29, 2003.

ADDRESSES:

Use one of the following addresses to submit comments on this AD:

- By mail: The Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-NE-37-AD, 12 New England Executive Park, Burlington, MA 01803-5299.
- By fax: (781) 238-7055.
- By e-mail: *9-ane-adcomment@faa.gov*.

You can get the service information referenced in this AD from Rolls-Royce plc, P.O. Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-245418.

You may examine the AD docket, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA. You may examine the

service information, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park; telephone (781) 238-7176; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The Civil Aviation Authority, (CAA), which is the airworthiness authority for the United Kingdom (U.K.), recently notified the FAA that an unsafe condition may exist on RR RB211 Trent 768-60 engines with serial numbers (SNs) before SN 41056 and RB211 Trent 772-60 engines with SNs before SN 41056. The CAA advises that an LP turbine stage 4 blade failed during a development test. Examination of the LP turbine case and attaching bolts, which had been subjected to the stage 4 blade failure at the shank, showed severe radial distortion of the rear flange and a number of bolts which had failed in shear or a combination of shear and tension. The initial distortion and flange separation occurred locally at the blade impact point and allowed debris to become trapped between the flanges. This debris then contacted with the remaining rotating blades resulting in enough flange separation to allow release of high-energy debris.

Relevant Service Information

We have reviewed and approved the technical contents of RR Mandatory Service Bulletin (MSB) No. RB.211-72-C224, Revision 4, dated April 12, 2002, that describes the procedures for reworking the LP turbine nozzle vane case, the LP turbine bearing support exhaust case, and the support arm bracket assemblies. The CAA classified this service bulletin as mandatory and issued AD 010-03-99, dated April 12, 2002, in order to ensure the airworthiness of these RR plc engines in the U.K.

Bilateral Airworthiness Agreement

This engine model is manufactured in the U.K. and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Under this bilateral airworthiness agreement, the CAA has kept the FAA informed of the situation described above. We have examined the findings of the CAA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

FAA's Determination and Requirements of This AD

Although no airplanes that are registered in the United States use these engines, the possibility exists that the engines could be used on airplanes that are registered in the United States in the future. The unsafe condition described previously is likely to exist or develop on other RR Trent 768-60 and Trent 772-60 engines of the same type design. We are issuing this AD to prevent possible uncontained LP turbine case failure and damage to the airplane. This AD requires reworking the LP turbine nozzle vane case, the LP turbine bearing support exhaust case, and the support arm bracket assemblies. You must use the service information described previously to perform the actions required by this AD.

FAA's Determination of the Effective Date

Since there are currently no domestic operators of this engine model, notice and opportunity for public comment before issuing this AD are unnecessary. Therefore, a situation exists that allows the immediate adoption of this regulation.

Changes to 14 CFR Part 39—Effect on the AD

On July 10, 2002, we issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs our AD system. This regulation now includes material that relates to special flight permits, alternative methods of compliance, and altered products. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Interim Action

These actions are interim actions and we may take further rulemaking actions in the future.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. 2003-NE-37-AD" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us verbally, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We are reviewing the writing style we currently use in regulatory documents. We are interested in your comments on whether the style of this document is clear, and your suggestions to improve the clarity of our communications with you. You may get more information about plain language at <http://www.faa.gov/language> and <http://www.plainlanguage.gov>.

Examining the AD Docket

You may examine the AD Docket (including any comments and service information), by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. See ADDRESSES for the location.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2003-NE-37-AD" in your request.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2003-22-03 Rolls-Royce plc: Amendment 39-13350. Docket No. 2003-NE-37-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective November 14, 2003.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Rolls-Royce plc (RR) RB211 Trent 768-60 turbofan engines with serial numbers (SNs) before SN 41056 and RB211 Trent 772-60 turbofan engines with SNs before SN 41056. These engines are installed on, but not limited to, Airbus A330 series airplanes.

Unsafe Condition

- (d) This AD is prompted by a report of a low pressure (LP) stage 4 blade failure at the blade shank, resulting in severe radial distortion of the rear flange of the LP turbine case and failure of a number of attaching bolts, resulting in enough flange separation to allow the release of high energy debris. We are issuing this AD to prevent possible uncontained LP turbine case failure and damage to the airplane.

Compliance

- (e) You are responsible for having the actions required by this AD performed within 15 months after the effective date of this AD, unless the actions have already been done.

Rework of Affected Components

- (f) Rework the LP turbine nozzle vane case, part numbers (P/Ns) FK19488 and FK22687. Use Accomplishment Instruction paragraph 3.B. of RR Mandatory Service Bulletin (MSB) No. RB.211-72-C224, Revision 4, dated April 12, 2002.

- (g) Rework the LP turbine bearing support exhaust case, P/N FK22791. Use Accomplishment Instruction paragraph 3.C. of RR MSB No. RB.211-72-C224, Revision 4, dated April 12, 2002.

- (h) Rework the support arm bracket assembly, P/N FK29121. Use Accomplishment Instruction paragraph 3.D. of RR MSB No. RB.211-72-C224, Revision 4, dated April 12, 2002.

Conditions for Installation

(i) Reworked components identified in paragraphs (f), (g), and (h) of this AD must be installed as a complete set only.

(j) Information on interchangeability of parts can be found in section 1.M. of RR MSB RB.211-72-C224, Revision 4, dated April 12, 2002.

(k) After the effective date of this AD, do not install any modules marked M08821AA, M08821AB, or core engines TRENT121AA, or TRENT122AA into any engine.

Alternative Methods of Compliance

(l) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(m) You must use the service information specified in Table 1 to perform the actions required by this AD. The Director of the Federal Register approved the incorporation by reference of the documents listed in Table 1 of this AD in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Rolls-Royce plc, P.O. Box 31, Derby, England, DE248BJ; telephone: 011-44-1332-242424; fax: 011-44-1332-245418. You may review copies at Federal Aviation Administration, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC. Table 1 follows:

TABLE 1.—INCORPORATION BY REFERENCE			
Service bulletin No.	Page	Revision	Date
Rolls-Royce plc Mandatory Service Bulletin RB.211-72-C224	1	14	April 12, 2002.
	2-3	3	September 12, 2001.
	4-7	4	April 12, 2002.
	8-9	3	September 12, 2001.
	10-14	4	April 12, 2002.
	15-16	3	September 12, 2001.
	17	4	April 12, 2002.
	18-36	3	September 12, 2001.
Total Pages: 36.			

Related Information

(n) CAA airworthiness directive 010-03-99, dated April 12, 2002, also addresses the subject of this AD.

Issued in Burlington, Massachusetts, on October 20, 2003.

Jay J. Pardee,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 03-27153 Filed 10-29-03; 8:45 am]

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